



Dart Hawkesbury  
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada  
Tel (613) 632-5200

# Purchasing Receipts

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
PO040421	MCM001-VU	1	1	2% 10 Net 30	MDELINR2.000W	M Delrin Round Bar, White				5	7/20/2018	5		S092516	Stock	7/12/2018	\$ 17.60 / ft	5		\$88.00	McMaster-Carr Supply Co.
		2			MDELINR6.000W	M-Delrin Round Bar, White				6		6		S091253	Stock	7/12/2018	\$ 114.26 / ft	5		\$685.56	McMaster-Carr Supply Co.
		3			91801A260	Flat Head Screw				50		50		S091254	Stock	7/12/2018	\$ 0.24 / Ea	5		\$12.09	McMaster-Carr Supply Co.
		4			91287A787	Hex Head Screw M14 x 2mm Thread				12		12		S091255	Stock	7/12/2018	\$ 2.92 / Ea	5		\$35.04	McMaster-Carr Supply Co.
		5			90965A200	SS Flat Washer for M10 Screw				50		50		S091256	Stock	7/12/2018	\$ 0.23 / Ea	5		\$11.72	McMaster-Carr Supply Co.
		6			94150A358	SS Hex Nut M10 x 1.5mm				10		10		S091257	Stock	7/12/2018	\$ 1.27 / Ea	5		\$12.66	McMaster-Carr Supply Co.
		7			98863A368	316 Stainless Steel Threaded Rod M10 x 1.5mm				12		12		S091258	Stock	7/12/2018	\$ 12.16 / Ea	5		\$145.92	McMaster-Carr Supply Co.
		8			92497A450	Hex Nut				50		50		S091259	Stock	7/12/2018	\$ 0.26 / Ea	5		\$13.03	McMaster-Carr Supply Co.
		9			94411A510	Clevis Pin Ø3/16 x 1/2				30		30		S092422	Stock	7/16/2018	\$ 11.50 / Ea	1		\$345.00	McMaster-Carr Supply Co.
		10			91263A835	Hex Drive Flat Head Screw, M5 X 0.8 X 20mm				100		100		S091260	Stock	7/12/2018	\$ 0.11 / Ea	5		\$11.39	McMaster-Carr Supply Co.
		11			91280A718	Bolt, M12 X 1.75 X 35mm				25		25		S091261	Stock	7/12/2018	\$ 0.51 / Ea	5		\$12.65	McMaster-Carr Supply Co.
		12			91292A135	Socket Cap Screw				50		50		S091262	Stock	7/12/2018	\$ 0.15 / Ea	5		\$7.28	McMaster-Carr Supply Co.

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Total	Supplier Name
		13			91292A413					10		10		S091263	Stock	7/12/2018	\$ 0.41 / Ea	5	\$4.09	McMaster-Carr Supply Co.
		14			91292A199	Socket Cap Screw, SS, M5 X 0.8 X 80mm						10		S091264	Stock	7/12/2018	\$ 0.57 / Ea	5	\$5.72	McMaster-Carr Supply Co.
		15			MT-01-R1-750	Tool Steel Round Bar 1.750 dia. receive ft				6		6		S092501	Stock	7/12/2018	\$ 27.21 / ft	5	\$163.27	McMaster-Carr Supply Co.
		16			92620A750	Hex Head Cap Screw 1/2-20 UNF x 3 receive ea				10		10		S091265	Stock	7/12/2018	\$ 5.39 / Ea	5	\$53.90	McMaster-Carr Supply Co.
		17			88625K67	Dowel Pin 1/25mm x 40mm				90		90		S092517	Stock	7/12/2018	\$ 1.90 / ft	5	\$171.00	McMaster-Carr Supply Co.
		18			92560A112	Threaded Rod 5/8-18				24		24		S092518	Stock	7/12/2018	\$ 4.82 / ft	5	\$115.76	McMaster-Carr Supply Co.
		19										24		S092519	Stock	7/12/2018	\$ 4.82 / ft	5	\$115.76	McMaster-Carr Supply Co.
		20			91595A112	Dowel Pin 1/8 x 12mm receive ea				50		50		S091266	Stock	7/12/2018	\$ 0.16 / Ea	5	\$7.86	McMaster-Carr Supply Co.
		21			91166A270	Washer, M8 receive ea				100		100		S091267	Stock	7/12/2018	\$ 0.03 / Ea	5	\$3.28	McMaster-Carr Supply Co.
		22			94125K815	Compression Spring 11.25mm OD x 44.5mm receive ea				25		25		S091268	Stock	7/12/2018	\$ 2.47 / Ea	5	\$61.65	McMaster-Carr Supply Co.
		23			91595A155	Dowel Pin 4mm x 12mm receive ea				100		100		S091269	Stock	7/12/2018	\$ 0.19 / Ea	5	\$18.70	McMaster-Carr Supply Co.
		24			HT-500-CWA-010P-40	Push Lock Adapter, Male				25		25		S091270	Stock	7/12/2018	\$ 0.44 / Ea	5	\$11.00	McMaster-Carr Supply Co.
		25			HT-500-CWA-010P-73	FERRULE				10		10		S091271	Stock	7/12/2018	\$ 1.79 / Ea	5	\$17.92	McMaster-Carr Supply Co.

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name		
Total:											884		884									\$2,130.25	

Plex 7/17/2018 8:38 AM dart.Tollis.Andrew



200 Aurora Industrial Pkwy  
Aurora OH 44202-8087  
330-995-5500  
cle.sales@mcmaster.com

Dart Aerospace Ltd  
1270 Aberdeen St  
Hawkesbury ON K6A 1K7  
Canada

Purchase Order  
**PO040421**

Order Placed By  
**Chantal Lavoie**

McMaster-Carr Number  
**5931995-02**

Page 1 of 1

07/06/2018

Line	Product	Ordered	Shipped
1	8572K29 White Delrin® Acetal Resin Rod, 2" Diameter, 5' Length	5 Feet	5
17	88625K67 Tight-Tolerance Multipurpose O1 Tool Steel Rod, 8 mm Diameter, 3 Feet Long	30 Each	30
18	92580A112 Grade B7 Medium-Strength Steel Threaded Rod, 5/8"-18 Thread Size, 3 Feet Long	8 Each	8
19	92580A112 Grade B7 Medium-Strength Steel Threaded Rod, 5/8"-18 Thread Size, 3 Feet Long	8 Each	8

### Expected to ship

9	94411A510 Wedge-Lock Clevis Pin, 18-8 Stainless Steel, 3/16" Diameter, 1/2" Usable Length	30 Each	30 Jul 24-Aug 1
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200 Aurora Industrial Pkwy  
Aurora OH 44202-8087  
330-995-5500  
cle.sales@mcmaster.com

Dart Aerospace Ltd  
1270 Aberdeen St  
Hawkesbury ON K6A 1K7  
Canada

Purchase Order  
**PO040421**

Order Placed By  
**Chantal Lavoie**

McMaster-Carr Number  
**5931995-01**

Page 1 of 1

07/06/2018

Line	Product	Ordered	Shipped
15	8893K107 Tight-Tolerance Multipurpose O1 Tool Steel Rod, 1.7500" Diameter, 6 Feet Long	1 Each	1
Expected to ship			
9	94411A510 Wedge-Lock Clevis Pin, 18-8 Stainless Steel, 3/16" Diameter, 1/2" Usable Length	30 Each	30 Jul 24-Aug 1



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

# **PURCHASE ORDER** **PO040421**

**Supplier:** MCM001-VU  
McMaster-Carr Supply Co.  
P.O. Box 7690  
Chicago, IL 60680-7690 USA  
Phone: 330 995 5500  
Fax: 330 995 9600

**PO No:** PO040421

**PO Date:** 7/6/18

**Due Date:** 7/11/18

**Purchase Order  
Revision:**

**Revision Date:**

**Ship-To Contact:** Lavoie, Chantal  
clavoie@dartaero.com

**Via:** Ground

**Pymt Terms:** 2% 10 Net 30

**Freight Terms:**

**Special Comments:**

**E-MAILED**  
JUL 05 2018

**Ship To:** 1270 Aberdeen Street  
Hawkesbury  
ON  
K6A 1K7 Canada  
Phone: 613-632-5200

## **Items**

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1		MDELRINR2.000W	8572K29 5 FT	M Delrin Round Bar, White	Firmed	-	7/11/18	5 ft	0 ft	5 ft	\$17.60/ft	\$88.00
2		MDELRINR6.000W	8582K48	M-Delrin Round Bar, White	Firmed	-	7/11/18	6 pcs	0 pcs	6 pcs	\$114.26/pcs	\$685.56
3		91801A260	50/pk	Flat Head Screw	Firmed	-	7/11/18	50 Ea	0 Ea	50 Ea	\$0.2418/Ea	\$12.09
4		91287A787	1/pk	Hex Head Screw M14 x 2mm Thread	Firmed	-	7/11/18	12 Ea	0 Ea	12 Ea	\$2.92/Ea	\$35.04
5		90965A200	50/pk	SS Flat Washer for M10 Screw	Firmed	-	7/11/18	50 Ea	0 Ea	50 Ea	\$0.2344/Ea	\$11.72
6		94150A358	10/pk	SS Hex Nut M10 x 1.5mm	Firmed	-	7/11/18	10 Ea	0 Ea	10 Ea	\$1.266/Ea	\$12.66
7		98863A368	1/pk	316 Stainless Steel Threaded Rod M10 x 1.5mm	Firmed	-	7/11/18	12 Ea	0 Ea	12 Ea	\$12.16/Ea	\$145.92
8		92497A450	50/pk	Hex Nut	Firmed	-	7/11/18	50 Ea	0 Ea	50 Ea	\$0.2606/Ea	\$13.03
9		94411A510	1/pk	Clevis Pin Ø3/16 x 1/2	Firmed	-	7/11/18	30 Ea	0 Ea	30 Ea	\$11.50/Ea	\$345.00

## Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
10		91263A835	100/pk	Hex Drive Flat Head Screw, M5 X 0.8 X 20mm	Firmed	-	7/11/18	100 Ea	0 Ea	100 Ea	\$0.1139/Ea	\$11.39
11		91280A718	25/pk	Bolt, M12 X 1.75 X 35mm	Firmed	-	7/11/18	25 Ea	0 Ea	25 Ea	\$0.506/Ea	\$12.65
12		91292A135	50/pk	Socket Cap Screw	Firmed	-	7/11/18	50 Ea	0 Ea	50 Ea	\$0.1456/Ea	\$7.28
13		91292A413	10/pk	Socket Cap Screw	Firmed	-	7/11/18	10 Ea	0 Ea	10 Ea	\$0.409/Ea	\$4.09
14		91292A199	10/pk	Socket Cap Screw, SS, M5 X 0.8 X 80mm	Firmed	-	7/11/18	10 Ea	0 Ea	10 Ea	\$0.572/Ea	\$5.72
15		MT-O1-R1.750	8893K107 6ft long	Tool Steel Round Bar 1.750 dia. receive ft	Firmed	-	7/11/18	6 ft	0 ft	6 ft	\$27.211666/ft	\$163.27
16		92620A750	1/pk	Hex Head Cap Screw 1/2-20 UNF x 3 receive ea	Firmed	-	7/11/18	10 Ea	0 Ea	10 Ea	\$5.39/Ea	\$53.90
17		88625K67	3 FT long	Dowel Pin Ø8mm x 40mm	Firmed	-	7/11/18	90 ft	0 ft	90 ft	\$1.90/ft	\$171.00
Line Item Note 30 pcs of 3 ft												
18		92580A112	3 FT long	Threaded Rod 5/8-18	Firmed	-	7/11/18	24 ft	0 ft	24 ft	\$4.82333/ft	\$115.76
19		92580A112	3 FT long	Threaded Rod 5/8-18	Firmed	-	7/11/18	24 ft	0 ft	24 ft	\$4.82333/ft	\$115.76
20		91595A112	50/pk	Dowel Pin ØM3 x 12mm receive ea	Firmed	-	7/11/18	50 Ea	0 Ea	50 Ea	\$0.1572/Ea	\$7.86
21		91166A270	100/pk	Washer, M8 receive ea	Firmed	-	7/11/18	100 Ea	0 Ea	100 Ea	\$0.0328/Ea	\$3.28
22		94125K815	5/pk	Compression Spring Ø1.25mm x 11.25mm OD x 44.5mm receive ea	Firmed	-	7/11/18	25 Ea	0 Ea	25 Ea	\$2.466/Ea	\$61.65
23		91595A155	50/pk	Dowel Pin 4mm x 12mm receive ea	Firmed	-	7/11/18	100 Ea	0 Ea	100 Ea	\$0.187/Ea	\$18.70
24		HT-500-CWA-010P-40	54105K37 25/pk	Push Lock Adapter, Male	Firmed	-	7/11/18	25 Ea	0 Ea	25 Ea	\$0.44/Ea	\$11.00
25		HT-500-CWA-010P-73	91465K91 5/PK	FERRULE	Firmed	-	7/11/18	10 Ea	0 Ea	10 Ea	\$1.792/Ea	\$17.92



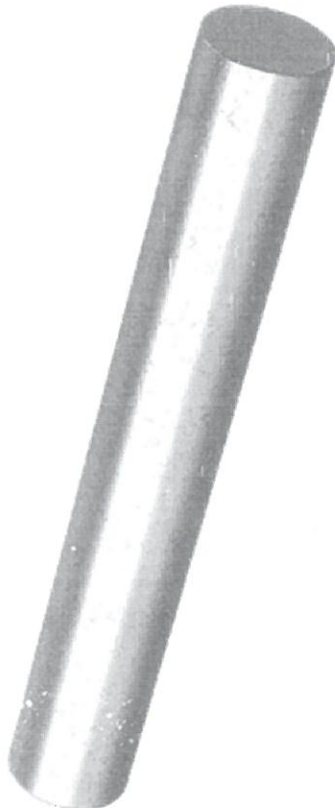






Tight-Tolerance Multipurpose O1 Tool Steel Rod  
1.7500" Diameter

8893K107



Material	O1 Tool Steel
Cross Section Shape	Round
Construction	Solid
Appearance	Plain
Diameter	1.75"
Diameter Tolerance	-0.001" to 0.001"
Tolerance Rating	Tight
Yield Strength	50,000 psi
Temper Rating	Softened (Annealed)
Hardness	Rockwell B90
Hardness Rating	Medium
Heat Treatable	Yes
Maximum Hardness after Heat Treatment	Rockwell C65
Mechanical Finish	Precision Ground
Temperature Range	Not Rated
Specifications Met	ASTM A681
Straightness Tolerance	Not Rated
Density	0.28 lbs./cu. in.
Coefficient of Thermal Expansion	$7.1 \times 10^{-6}$
Elongation	25%
Material Composition	
Iron	94.79-96.95%
Carbon	0.85-1.05%
Chromium	0.40-0.70%
Manganese	1.00-1.40%
Nitrogen	0.40-0.60%

Phosphorus	0-0.030%
Silicon	0-0.50%
Sulfur	0-0.030%
Tungsten	0.40-0.60%
Vanadium	0-0.30%
Length	1 ft., 3 ft., 6 ft.
Additional Specifications	Guidelines for Heat Treating Tool Steel
RoHS	Compliant

These precision-ground rods have a tight diameter tolerance. Commonly used for dies, punches, and gauges, O1 tool steel is an oil-hardening material that resists wear and abrasion.

## SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI O1 TOOL STEEL ROUND BAR

SPECIFICATION:

DIN 1.2510 or B.S. BO 1 or  
SAE J437 or SAE J438  
or UNS T31501 or ASTM A681

PART NUMBER:

MT-O1-R [D.DDD]  
WHERE "D.DDD" = DIAMETER IN INCHES  
EG. 5/8" ROUND BAR = MT-O1-R0.625

REV	DESCRIPTION	DATE	BY	APPROVED
A	NEW ISSUE	17.08.09	VM	VM

<b>DART</b> AEROSPACE		ISO 9001:2008 Certified	
AISI O1 TOOL STEEL ROUND BAR			
Drawn By:	VM 08/09/2017	Checkd By:	VM 08/09/2017
Checked By:	SAC 08/09/2017	QA Appr:	PD 09/05/2017
QA Appr:	PD 09/05/2017	Approved:	VM 09/12/2017
DATE:	8/31/2017	SCALE:	N.T.S. WEIGHT N/A LBS
REV		REV	
A		A	
COPYRIGHT © 2017 BY DART AEROSPACE LTD.			

EN 17-149

## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-01-R1.750  
 DATE: 18/07/17

PO / BATCH NO.: P0040421/S092501

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 6'  
 QUANTITY INSPECTED: 6'  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 1.750"  
 THICKNESS RECEIVED: 1.750"  
 SHEET SIZE ORDERED: —  
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <u>(N)</u>	
CORRECT FINISH	<u>(Y)</u> N	
CORROSION	Y <u>(N)</u>	
CORRECT GRAIN DIRECTION	<u>(Y)</u> N	
CORRECT MATERIAL PER M-DRAWING	<u>(Y)</u> N	<u>ASTM A681</u>
CORRECT THICKNESS	<u>(Y)</u> N	
PHOTO REQUIRED	Y <u>(N)</u>	
CORRECT REF # TO LINK CERT	<u>(Y)</u> N	<u>P0040421</u>
CORRECT MATERIAL IDENTIFICATION	<u>(Y)</u> N	
CORRECT M# ON THE MATERIAL	<u>(Y)</u> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <u>(N)</u>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <u>(N)</u>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AI</u>	SIGNED OFF BY: _____
DATE: <u>18/07/17</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

# McMASTER-CARR®

## White Delrin® Acetal Resin Rod 2" Diameter

In stock  
\$17.60 per ft.  
8572K29



Material	Delrin® Acetal Plastic
Cross Section Shape	Round
Construction	Solid
Texture	Smooth
Color	White
Clarity	Opaque
Diameter	2"
Diameter Tolerance	0" to +0.005"
Tolerance Rating	Oversized
Length	1 ft., 2 ft., 3 ft., 4 ft., 5 ft.
Hardness	Rockwell M90
Hardness Rating	Hard
For Use Outdoors	No
Temperature Range	-20° to 180° F
Impact Strength	1.00 ft.-lbs./in.
Impact Strength Rating	Good
Tensile Strength	9,000 psi
Tensile Strength Rating	Good
Specifications Met	ASTM D6100, NSF/ANSI Standard 51 for Food Contact, NSF/ANSI Standard 61 for Drinking Water
Density	0.051 lbs./cu. in.
Coefficient of Friction	0.20
Dielectric Strength	435 V/mil
Water Absorption	0.30%
Coefficient of Thermal Expansion	$8.5 \times 10^{-5}$ in./in./°F
RoHS	Compliant

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : DELRIN 1150E OR ACETRON GP ACETAL

PART NUMBER : M-DELRIN-R D.DDD X COLOR CODE  
DIA

WHERE D.DDD = DIAMETER IN INCHES  
X = COLOR CODE, "W" = WHITE, OMITTED = BLACK  
EG. 1" BLACK ROUND BAR = M-DELRIN-R1.000  
2" WHITE ROUND BAR = M-DELRIN-R2.000W

RELEASED  
2018 MAR 27 4  
EJN 18-657

APPROVED

B	UPDATE DRAWING TO CURRENT STANDARDS. ADD MATERIAL COLOR "WHITE". ADD REASON CIR-110. ADD "ACETRON GP ACETAL" AS OPTION (REV. A1).		SAD	17.10.19
A	NEW ISSUE		DS	01.11.12
REV.	DATE			
DESIGN	SAD	DART AEROSPACE LTD		
DRAWN	SAD	HAWKESBURY, ONTARIO, CANADA		
CHECKED	RF	DRAWING NO		
MFG. APPR.	RA	M-DELRIN-R		
APPROVED	HS	TITLE		
DE APPR.	CP	DELIN ROUND BAR		
DATE	17.10.19	NTS		
COPYRIGHT © 2001 BY DART AEROSPACE LTD				
100% PROPERTY OF DART AEROSPACE LTD. ALL RIGHTS RESERVED. NO PART OF THIS DRAWING IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION IN WRITING FROM DART AEROSPACE LTD.				



## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MODEL R1NR 2.000W

PO / BATCH NO.: P0040421 / 501516

DATE: 18/07/17

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 2.000"

QUANTITY RECEIVED: 5H

THICKNESS RECEIVED: 2.000"

QUANTITY INSPECTED: 5H

SHEET SIZE ORDERED: —

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="radio"/> N	
CORRECT FINISH	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
CORROSION	Y	<input checked="" type="radio"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	<u>Delrin</u>
CORRECT THICKNESS	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
PHOTO REQUIRED	Y	<input checked="" type="radio"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	<u>P0040421</u>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="radio"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="radio"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>At</u> DATE: <u>18/07/17</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in